REMARKS

Claims 1-22 are pending. By this Amendment, dependent claims 16-22 are added. No new matter is added by the above amendments.

Claims 1, 2, 4, 6-8 and 12-15 stand rejected under 35 U.S.C. §102(b) over U.S. Patent No. 5,539,521 to Otokake et al. This rejection is respectfully traversed.

Otokake et al. discloses that a substrate 10, such as a photo-mask or reticle is supported by a plurality of points, a position of a pattern formed on the surface of the substrate is measured, and the measured position is corrected based on a displacement amount of the substrate caused by bending of the substrate due to the weight of the substrate. However, Otokake et al. does not disclose an exposure method or an apparatus for performing exposure, but merely discloses an apparatus for measuring patterns as noted above. See, for example, col. 5, lines 38-40. While the photo-mask or reticle of Otokake et al. subsequently is used in an exposure method and apparatus, Otokake et al. does not disclose or suggest any details about the exposure method or apparatus. In addition, Otokake et al. does not disclose exposing light onto a plurality of master masks formed by dividing an enlarged pattern of a transfer pattern, reducing a pattern image for each master mask, and transferring the reduced images onto a mask substrate on which the transfer pattern is to be formed. Accordingly, Otokake et al. does not disclose or suggest the various features/steps of the independent claims of this application.

In particular, with respect to independent claim 1, Otokake et al. does not disclose or suggest a method of exposure for irradiating exposure light on a plurality of master masks formed by dividing an enlarged pattern of a transfer pattern, reducing a pattern image for each master mask, and transferring the reduced images onto a mask substrate on which the transfer pattern is to be formed. In addition, Otokake et al. does not disclose or suggest "adjusting at least one of (i) a relative positional relationship between the pattern image and the mask

substrate at the time of transfer of the pattern image [onto the mask substrate] and (ii) projection characteristics of the pattern image" based on detected deformation information.

With respect to independent claim 6, Otokake et al. does not disclose or suggest an exposure apparatus provided with an illumination system for irradiating illumination light to a plurality of master masks formed by dividing an enlarged pattern of a transfer pattern, and a projection optical system for reducing a pattern image for each master mask and projecting the pattern image onto a mask substrate on which the transfer pattern is to be formed. Otokake et al. also does not disclose or suggest the claim 6 "adjustment device which adjusts at least one of (i) a relative positional relationship between the pattern image and the mask substrate [onto which the pattern image is to be projected] and (ii) projection characteristics of the pattern image at the time of transfer of the pattern image" based on the deformation information that is detected.

With respect to independent claim 8, Otokake et al. does not disclose or suggest a method for transfer of a pattern onto a substrate by exposing the substrate by illumination light through a mask formed with the pattern. As noted above, Otokake et al. only discloses a measurement apparatus and method. In addition, Otokake et al. does not disclose or suggest the claim 8 step of "adjusting at least one of (i) a relative positional relationship between the pattern and the substrate [onto which the pattern is to be exposed] and (ii) transfer conditions of the pattern at the time of transfer of the pattern based on information relating to flexing of the substrate by its own weight corresponding to the transfer position of the pattern on the substrate."

With respect to independent claim 12, Otokake et al. does not disclose or suggest an exposure apparatus for transferring a pattern to a substrate by exposing the substrate by illumination light through a mask formed with the pattern. Otokake et al. also does not disclose or suggest the claim 12 "adjustment device which adjusts at least one of (i) a relative

positional relationship between the pattern and the substrate [onto which the pattern is to be transferred] and (ii) transfer conditions of the pattern at the time of transfer of the pattern based on information relating to flexing of the substrate by its own weight corresponding to the transfer position of the pattern on the substrate."

With respect to independent claim 13, as noted above, Otokake et al. does not disclose to suggest an exposure apparatus, but merely discloses a measuring apparatus. Otokake et al. also does not disclose or suggest the claim 13 "correction device which corrects a transfer error of the pattern which is caused by supporting the substrate on the three support portions based on deformation information of the substrate by its own weight."

Withdrawal of the rejection based on Otokake et al. is requested.

Claims 1, 3, 6, 8, 9 and 12-14 stand rejected under 35 U.S.C. §102(e) over US2003/0016447 to Kato et al. This rejection is respectfully traversed.

Kato et al. discloses an exposure apparatus which transfers a pattern of a reticle onto a substrate via a projection optical system having a diffractive optical element. Kato et al. teaches that the diffractive optical element (not the substrate onto which the image is transferred) can deform due to its own weight, and compensates for such deformations of the diffractive optical element.

Accordingly, Kato et al. does not disclose or suggest detecting deformation information of a mask substrate onto which a pattern image is to be transferred and does not disclose or suggest adjusting anything in view of such deformation information, as recited in independent claims 1 and 6. Kato et al. also does not disclose or suggest adjusting anything based on information relating to flexing of a substrate onto which an image is to be transferred, as recited in independent claims 8, 12 and 13. Accordingly, Kato et al. does not disclose or suggest the combinations of features/steps recited in the independent claims of this application.

Withdrawal of the rejection based upon Kato et al. is requested.

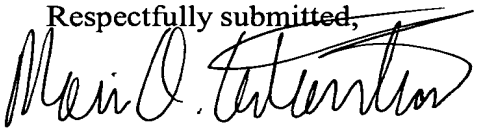
Claims 5, 10 and 11 stand rejected under 35 U.S.C. §103(a) over Otokake et al. in view of U.S. Patent No. 6,078,380 to Taniguchi et al. This rejection is respectfully traversed.

Claims 5, 10 and 11 are patentable for at least the reasons set forth above with respect to their corresponding independent claims 1 and 8. Withdrawal of the rejection based upon Otokake et al. and Taniguchi et al. is requested.

In view of the foregoing, Applicant respectfully submits that this application is in condition for allowance. Favorable reconsideration and prompt allowance are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact Applicant's undersigned attorney at the telephone number listed below.

Respectfully submitted,



Mario A. Costantino
Registration No. 33,565

MAC/ccs

Attachments:
Amendment Transmittal
Petition for Extension of Time

Date: December 23, 2004

OLIFF & BERRIDGE, PLC
P.O. Box 19928
Alexandria, Virginia 22320
Telephone: (703) 836-6400

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